



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/684,472	10/06/2000	Suban Krishnamoorthy	PD99-2879	4021
25235	7590	07/12/2004	EXAMINER	
HOGAN & HARTSON LLP ONE TABOR CENTER, SUITE 1500 1200 SEVENTEENTH ST DENVER, CO 80202			LEE, PHILIP C	
			ART UNIT	PAPER NUMBER
			2154	
DATE MAILED: 07/12/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

b

P24

<b>Office Action Summary</b>	Application No.	Applicant(s)
	09/684,472	KRISHNAMOORTHY ET AL.
	Examiner Philip C Lee	Art Unit 2154

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 29 April 2004.
- 2a) This action is **FINAL**.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-20 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                    | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____. | 6) <input type="checkbox"/> Other: _____.   |

1. This action is responsive to the amendment and remarks filed on April 29, 2004.
2. Claims 1-20 are presented for examination.
3. The text of those sections of Title 35, U.S. code not included in this office action can be found in a prior office action.

*Claim Rejections – 35 USC 102*

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

5. The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the

reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

6. Claims 1, 3-10 and 12-13 are rejected under 35 U.S.C. 102(e) as being anticipated by Mann et al, U.S. Patent 6,654,801 (hereinafter Mann).

7. Mann was cited in the last office action.

8. As per claim 1, Mann taught the invention as claimed comprising:  
a network interconnection system (col. 5, lines 14-32);  
at least one machine selected from a group comprised of a host and an appliance, the machine coupled to the network interconnection system (fig. 1; col. 4, lines 45-46);  
at least one storage system coupled to the network interconnection system (col. 4, lines 54-59);  
a network management system (fig. 1);  
wherein the network management system further comprises:  
at least one management client (col. 4, lines 40-45); and  
at least one integrated management agent running on a machine of the at least one machine (col. 4, lines 46-49); and  
wherein the integrated management agent comprises an object manager configured such that the integrated management agent is expandable to support additional network device

types by installing device type-specific modules while the integrated management agent is running (fig. 6; col. 12, lines 13-47).

9. As per claim 3, Mann taught the invention as claimed in claim 1 above. Mann further taught wherein the integrated management agent further comprises a consistent user interface module coupled to the object manager, wherein at least one device type-specific module is installed (col. 6, lines 24-30), and wherein the at least one device type-specific module further comprises a device handler for coupling a storage system to the integrated management agent (col. 11, lines 14-22).

10. As per claim 4, Mann taught the invention as claimed in claim 3 above. Mann further taught wherein at least one device type-specific module further comprises code for supporting a plurality of protocols to communicate with a plurality of devices (col. 6, lines 49-54).

11. As per claim 5, Mann taught the invention as claimed in claim 4 above. Mann further taught wherein the management system further comprises a distributed error and status handler capable of handling error and status information from at least one device (col. 11, lines 39-col. 12, lines 12).

Art Unit: 2154

12. As per claim 6, Mann taught the invention as claimed in claim 5 above. Mann further taught wherein at least a first level of the distributed error and status handler executes on the at least one device (col. 9, lines 54-65).

13. As per claims 7 and 8, Mann taught the invention as claimed in claim 5 above. Mann further taught wherein the at least one machine selected from the group comprising of a host and an appliance, incorporates a second level of error and status handler (col. 9, lines 6-35).

14. As per claim 9, Mann taught the invention as claimed in claim 8 above. Mann further taught wherein the centralized global error and status handler level executes upon a fault tolerant system in a storage area network management environment (col. 9, lines 66-col. 10, lines 18).

15. As per claim 10, Mann taught the invention as claimed in claim 1 above. Mann further taught wherein the integrated management agent further comprises a trap handler coupled to a notification module to receive traps from at least one SAN device and send notification to at least one system administrator (col. 8, lines 56-col. 9, lines 12).

16. As per claim 12, Mann taught the invention as claimed in claim 1 above. Mann further taught wherein the integrated management system is capable of being configured with a configuration utility (col. 9, lines 66-col. 10, lines 18).

17. As per claim 13, Mann taught the invention as claimed in claim 1 above. Mann further taught wherein the object manager further comprises a dynamic list indicating device types the integrated management agent is capable of handling, wherein installing device type-specific modules causes addition of device types to the dynamic list, and wherein addition of device types to the dynamic list does not require shutting down the integrated management agent (col. 10, lines 67-col. 11, lines 26).

*Claim Rejections – 35 USC 103*

18. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

19. Claims 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mann.

20. As per claim 18, Mann taught the invention substantially as claimed comprising:  
an integrated management agent capable of managing components of a network, the integrated management agent comprising a device agent (col. 4, lines 40-53) ;

the device agent comprising an object-based device handler sublayer and a protocol-dependent device handler sublayer, the protocol-dependent device handler sublayer comprising multiple modules, each respective module of the multiple modules adapted to support a respective device-type-specific protocol (col. 6, lines 24-30; col. 11, lines 14-22); and

wherein a particular module of the multiple modules that is adapted to support a particular device-type-specific protocol may be installed to or uninstalled from the protocol-dependent device handler sublayer independently of other modules of the multiple modules while the integrated management agent is running (col. 12, lines 13-47).

21. Mann did not specifically teach managing components of a storage area network. However, Mann taught different implementations may be used and may include other types of operating systems, computing platforms, computer programs, firmware and/or general purpose machines. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to include components of a storage area network because by doing so would increase the field of use in their system.

22. As per claim 19, Mann taught the invention substantially as claimed in claim 18 above. Mann further taught wherein the integrated management agent further comprises an object manager that represents the components of the SAN as objects, and wherein the object-based device handler sublayer provides an interface between the object manager and the protocol-

dependent device handler sublayer to permit an object level interface to the devices (col. 5, lines 24-40).

23. As per claim 20, Mann taught the invention substantially as claimed in claim 18 above. Mann further taught wherein the integrated management agent further comprises a dynamic list of device-type-specific protocols that it is capable of using, wherein each device-type-specific protocol is associated with a list of objects and methods, and wherein a given list of objects and methods is added to the dynamic list when a given module of the multiple modules supporting a given device-type-specific protocol is installed to the protocol-dependent device handler sublayer (col. 6, lines 24-30; col. 10, lines 67-col. 11, lines 26).

24. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mann in view of “Official Notice”.

25. As per claim 2, Mann taught wherein the integrated management agent further comprises a consistent user interface module, and wherein the consistent user interface module supports a Windows-based user interface (col. 4, lines 25-29). Mann did not specifically show detailing the consistent user interface module supports a web-based user interface. However, Mann taught the consistent user interface module could be used with different implementations and may include other types of operating systems, computing platforms, computer programs, firmware, etc (col. 4, lines 30-33). “Official Notice” is taken that the consistent user interface module supports a web-based user interface is well known and expected in the art. It would have been obvious to one

Art Unit: 2154

having ordinary skill in the art at the time of the invention was made to include different implementation such as a web-based user interface because by doing so would increased the usability of the integrated management agent.

26. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mann in view of Singh et al, U.S. Patent 5,758,083 (hereinafter Singh).

27. As per claim 11, Mann did not teach sending traps to support at least a second management system. Singh taught wherein the integrated management agent further capable of sending traps to support at least a second management system (col. 2, lines 8-25; col. 21, lines 40-50).

28. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to combine the teachings of Mann and Singh because Singh's method of sending traps to a second management system would increased the user alertness of Mann's system by allowing user to take corrective action to improve network performance by taking into consideration important network information about remote networks (col. 4, lines 58-62)

29. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mann in view of Tawil, U.S. Patent 6,421,723 (hereinafter Tawil).

30. As per claim 14, Mann taught the invention as claimed in claim 13 above. Mann did not teach the network interconnection system comprises at least one fibre channel switch. Tawil taught wherein the network interconnection system further comprises at least one fibre channel switch, and wherein a device type specific module is type specific to the at least one fibre channel switch (col. 3, lines 50-col. 4, lines 3).

31. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to combine the teachings of Mann and Tawil because Tawil's method of including a fibre channel switch would enhanced Mann's system by using fibre channel technology to allow data and network protocols to coexist on the same physical media (col. 4, lines 12-19).

32. Claims 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mann in view of Chrabaszcz, U.S. Patent 6,212,585 (hereinafter Chrabaszcz).

33. As per claim 15, Mann taught the invention as claimed in claim 1 above. Mann did not teach a firmware download module. Chrabaszcz taught wherein the integrated management system further comprises a firmware download module with unified user interface hiding device specific firmware download process and characteristics from the administrator (col. 10, lines 49-col. 11, lines 15).

Art Unit: 2154

34. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to combine the teachings of Mann and Chrabaszcz because Chrabaszcz's method of automatically downloading the firmware for a device would increased the efficiency of Mann's system by avoiding the time consuming and tedious process of manually loading an appropriate driver for the device (col. 3, lines 15-27).

35. As per claims 16 and 17, Mann taught the invention as claimed in claim 1 above. Mann did not teach the different element of the conglomerate method. Chrabaszcz taught wherein the integrated management agent is capable of discovering devices and agents in the SAN and their interconnection by applying a conglomerate method comprising at least two elements selected from the group comprising host and device agent broadcasting, multicasting device identity, collecting addresses from network traffic, collecting information from a name server, scanning a set of ranges of address supplied in configuration information, and collecting information about devices from configuration information (col. 9, lines 49-col. 10, lines 49).

36. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to combine the teachings of Mann and Chrabaszcz because Chrabaszcz's method of discovering devices and agents in the SAN and their interconnection would increased the efficiency of Mann's system by avoiding the time consuming and tedious process of manually configuring new devices added to the integrated management agent.

Art Unit: 2154

37. Applicant's arguments with respect to claims 1-17, filed 4/29/04, have been fully considered but are not deemed to be persuasive

38. Applicant's arguments with respect to claims 18-20, filed 4/29/04, have been fully considered but are not deemed to be persuasive and are moot in view of the new grounds of rejection.

39. In the remark applicant argued that

- (1) Mann fails to teach modules being installed into an integrated management agent.
- (2) a consistent user interface module that supports a web-based user interface is not well known in the art.

40. In response to point (1), Applicant did not claim modules being installed into an integrated management agent. Applicant claims the integrated management agent is expandable *to support* network device types by installing device type-specific modules.

41. Mann taught the integration of service or node into a network management system by installing the device-type-specific modules into the database of the network control console (col. 12, lines 13-47; col. 11, lines 10-11). Mann further taught wherein the service may be a new application running on a node, or it may be an additional device added to the data communications network (col. 10, lines 37-39).

42. In response to point (2), "Official Notice" is taken that the consistent user interface module supports a web-based user interface is well known and expected in the art. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to include different implementation such as a web-based user interface because by doing so would increased the usability of the integrated management agent (See Li et al, U. S. Patent 6,067,568, col. 6, lines 12-30; See Lim et al, U.S. Patent 6,374,296, col. 10, lines 14-21).

43. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

44. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Art Unit: 2154

45. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Philip Lee whose telephone number is (703) 305-7721.

46. Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-9600.

Philip Lee

A handwritten signature consisting of a stylized 'P' and 'L' connected by a loop.

JOHN FOLLANSBEE  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2100